

CLAIMS:

1. A method for control of a device (1_a, 1_b, 1_c), which method comprises:

- visually presenting a number of user options for the device to be controlled (1_a, 1_b, 1_c);
- aiming a pointing device (2) comprising a camera (3) at the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) of the user options to choose a desired option;
- generating an image (5) of a target area (6) aimed at by the pointing device (2);
- comparing the target area image (5) with a pre-defined template of the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) to determine the chosen option.

10 2. A method according to claim 1, where a source of a concentrated beam of light (7) attached to the pointing device (2) shows the user (8) a light point (P_L) in the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) at which the pointing device (2) is aimed.

15 3. A method according to claim 1 or claim 2, where the chosen option is determined by locating a point in the template corresponding to a target point in the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) at which the user (8) has aimed the pointing device (2).

20 4. A method according to claim 3, where the light point (P_L) is located in the target area image (5) and is taken to be the target point.

5. A method according to claim 3, where a fixed point (P_T) in the target area image (5) is taken to be the target point.

6. A method according to any of claims 1 to 5, where a desired option is selected by the user (8) by aiming the pointing device (2) at the desired option in the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) and pressing a button (11) on the pointing device 5 (2).

7. A method according to any of claims 1 to 6, where the desired option is selected by the user (8) by moving the pointing device (2) over the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) in a pre-defined pattern.

10

8. A method according to any of claims 1 to 7, where the target point is determined using computer vision algorithms.

15

9. A method of any of claims 1 to 8, where the target point is determined by a method comprising the following steps:

20

- detecting distinctive points in the target image (5) of the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e);
- determining corresponding points in the template of the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e);
- developing a transformation for mapping the points in the target image (5) to the corresponding points in the template;
- using the transformation to determine the position and aspect of the pointing device (2) relative to the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e);
- locating the intersection point of a certain axis of the pointing device (2) with the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e).

10. A method according to any of claims 1 to 9, where the visual presentation of the device options (4_b, 4_c, 4_e) is presented in static form.

30

11. A method according to any of claims 1 to 10, where the visual presentation of the device options (4_a, 4_d) is presented dynamically.

12. A method according to any one of claims 1 to 11, where one or more 5 target area images (5) of user options for a plurality of devices to be controlled (1_a, 1_b, 1_c) are generated and compared to pre-defined templates and, depending on the option chosen, one or more of the plurality of devices (1_a, 1_b, 1_c) are controlled accordingly.

13. A user interface for control of a device (1_a, 1_b, 1_c), said user interface 10 comprising:

- an accessing unit (12) for accessing pre-defined templates associated with visual presentations of user options for the device to be controlled (1_a, 1_b, 1_c);
- a pointing device (2) for aiming at a desired option in a visual presentation (4_a, 4_b, 4_c, 4_d, 4_e) of the user options, comprising a camera (3) for generating an 15 image (5) of a target area (6) of at least part of the visual presentation (4_a, 4_b, 4_c, 4_d, 4_e);
- an image interpreter (13) for locating the target area (6) or a point of the target area (6) in a pre-defined template in order to determine the chosen option.

20 14. A user interface according to claim 13, comprising a transmission interface (14) for transmitting the images (5) to a control unit (16) assigned to a device (1_a, 1_b, 1_c);

15. A user interface according to claim 13 or 14, comprising a display unit 25 (15) for dynamically displaying a visual presentation (4_d) of the user options for the device to be controlled (1_a, 1_b, 1_c).

16. A user interface according to any of claims 13 to 15, comprising a 30 hardcopy output unit/module for generating a static visual presentation of the user options for the device to be controlled (1_a, 1_b, 1_c).

17. A pointing device (2) for a user interface according to one of claims 13 to 16, containing a camera (3) for generating an image (5) of a target area (6) in the direction (D) in which the pointing device (2) is aimed.

5

18. A pointing device (2) according to claim 17, comprising a light source (7) for illuminating the target area (6) at which the pointing device (2) is aimed.

19. A pointing device (2), extending along a longitudinal axis, containing a camera (3) positioned in the pointing device (2) such that the camera (3) generates an image (5) of a target area (6) in front of the pointing device (2) in the direction (D), along the longitudinal axis of the pointing device (2), in which the pointing device (2) is aimed.

15 20. A control unit (16) comprising a receiver (17) for receiving target area images (5) from a pointing device (2), an accessing unit (12) for accessing predefined templates associated with visual presentations (4_a, 4_b, 4_c, 4_d, 4_e) of user options for a device to be controlled (1_a, 1_b, 1_c), and an image interpreter (13) for locating the target area (5) or a point of the target area (5) in a pre-defined template in order to determine 20 the chosen option.

21. A device (1_a) comprising a control unit (16) according to claim 20.